IN THE CLAIMS

1. (Previously Presented) An apparatus for use in a wireless network environment and enabling a directed association of wireless clients to one of a plurality of wireless network access devices, comprising

a transmit/receive unit for wireless communication with at least one remote client element,

a network interface for communication with devices over a wired computer network, wherein the apparatus is operative to:

receive an association request from a remote client element, wherein the association request from the remote client element includes a list of one or more wireless network access devices detected by the remote client element during a scan;

compute a set of allowable wireless network access devices with which the remote client element may associate;

transmit an association response to the remote client element, wherein the association response identifies at least one of the wireless network access devices common to both the list of one or more wireless network access devices detected by the remote client element during a scan and the computed set of allowable wireless network access devices; and

establish and maintain, in an access point mode, wireless connections with remote client elements to bridge wireless traffic between the remote client elements and the computer network.

2. (Original) The apparatus of claim 1 wherein the wireless network access devices are access points.

3. (Original) The apparatus of claim 1 wherein the wireless network access devices are access elements in a wireless network system including hierarchical processing of protocol information.

4. (Original) The apparatus of claim 1 wherein the at least one wireless network access device transmitted in the association response is identified by wireless MAC address.

5. (Original) The apparatus of claim 4 wherein the at least one wireless network access device is further identified by BSSID.

6. (Original) The apparatus of claim 4 wherein the association response further includes the current operating channel association with the at least one wireless network access device.

7. (Original) The apparatus of claim 1 wherein the set of allowable wireless network access devices is computed using a load balancing algorithm.

8. (Canceled).

9. (Canceled).

10. (Original) The apparatus of claim 7 wherein the apparatus is operative to exchange load data with other apparatuses in the wireless network system.

11. (Previously Presented) The apparatus of claim 1 wherein the remote client element is operative to transmit probe requests to wireless network access devices, and wherein the apparatus is operative to receive from wireless network access devices in the wireless network system indications that the wireless network access devices detected the probe requests of the remote client element.

12. (Previously Presented) A wireless network system enabling a directed association mechanism, comprising

a plurality of access elements for wireless communication with at least one remote client element and for communication with a central control element;

a central control element for supervising at least one of said access elements, wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements; and

wherein the access elements are each operative to:

receive an association request from a remote client element, wherein the association request from the remote client element includes a list of one or more wireless network access devices detected by the remote client element during a scan;

transmit the association request to a corresponding central control element;

receive an association response from the central control element; and

transmit the association response to the remote client element;

wherein the central control element is operative to:

receive, via an access element, an association request from a remote client element;

compute a set of allowable access elements with which the remote client element may associate;

transmit an association response to the remote client element via an access element, wherein the association response identifies at least one of the access elements common to both the list of one or more wireless network access devices detected by the remote client element during a scan and the computed set of allowable access elements.

13. (Original) The system of claim 12 further comprising a computer network, wherein the central control element is coupled to the computer network, and wherein the central control element is operative to

establish a tunnel with access elements for transmission of wireless traffic associated with corresponding remote client elements, and

bridge network traffic between the computer network and a remote client element through a tunnel with a corresponding access element.

14. (Original) The system of claim 12 wherein the at least one access element transmitted in the association response is identified by wireless MAC address.

15. (Original) The system of claim 14 wherein the at least one access element is further identified by BSSID.

16. (Original) The system of claim 14 wherein the association response further includes the current operating channel associated with the at least one access element.

17. (Original) The system of claim 12 wherein the set of allowable access elements is computed using a load balancing algorithm.

18. (Canceled).

19. (Canceled).

20. (Original) The system of claim 17 further comprising at least a second central control element a central control element for supervising at least one of said access elements, wherein the central control element is operative to manage and control the wireless connections between the access elements and corresponding remote client elements; and wherein the central control elements are operative to exchange load data.

21. (Original) The system of claim 20 wherein the load data includes the number of remote client elements connected to each access element.

22. (Original) The system of claim 20 wherein the load data includes data throughput associated with each access element.

23. (Original) The system of claim 20 wherein the wireless client transmits probe requests to the access elements, and wherein the central control elements are operative to identify the access elements detecting the probe requests.

24. (Original) The system of claim 23 wherein the central control elements are further operative to compare the identified access elements detecting the probe requests of the wireless client to the set of allowable access elements, and wherein the association response includes at least one allowable access element that also detected probe requests of the wireless client.

25. (Previously Presented) In a wireless network environment comprising a plurality of wireless network access devices for wireless communication with wireless clients, a method enabling a directed association scheme, comprising

receiving an association request from a wireless client, wherein the association request from the wireless client includes a list of one or more wireless network access devices detected by the wireless client during a scan;

computing a set of allowable wireless network access devices with which the wireless client can associate;

identifying one or more common wireless network access devices common to both the set of allowable wireless network access devices and the list of one or more wireless network access devices detected by the wireless client:

transmitting an association response to the wireless client, wherein the association response includes one or more wireless network access devices common to both the set of allowable wireless network access devices and the list of one or more wireless network access devices detected by the wireless client.

26. (Original) The method of claim 25 wherein the at least one wireless network access device transmitted in the association response is identified by wireless MAC address.

27. (Previously Presented) The method of claim 26 wherein the at least one wireless network access device is further identified by BSSID.

28. (Original) The apparatus of claim 27 wherein the association response further includes the current operating channel association with the at least one wireless network access device.

29. (Original) The apparatus of claim 25 wherein the set of allowable wireless network access devices is computed using a load balancing algorithm.

30. (Previously Presented) In a wireless network environment comprising a plurality of wireless network access devices for wireless communication with wireless clients, a method enabling a directed association scheme, comprising

scanning, at a wireless client, for wireless network access devices in a wireless network environment;

selecting, at the wireless client, a wireless network access device identified in the scanning step;

transmitting, from the wireless client, an association request to the selected wireless network access device;

receiving, at the wireless client, an association response from the selected wireless network access device, wherein the association response denies the association request and identifies at least one allowable wireless network access device; and

transmitting, from the wireless client, an association request to one of the at least one allowable wireless network access device.

31. (Previously Presented) The method of claim 30 wherein the association request includes a list of one or more wireless network access devices detected in the scanning step.

32. (Original) The method of claim 30 further comprising storing the wireless network access devices detected in the scanning step.

33. (Original) The method of claim 30 wherein the wireless network access devices are access points.

34. (Original) The method of claim 30 wherein the wireless network access devices are access elements in a wireless network system including hierarchical processing of protocol information.